O & M Manual Template

Project Number:

Project Description:

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1. Document Control Resources

Roles and responsibilities

Insert **‘Applicable’** or **‘Not Applicable’** for Stakeholders involved in the consolidation/review process.

|  |  |  |  |
| --- | --- | --- | --- |
| **Company** | **Role** | **Person(s) or Position(s)** | **Applicable/Not Applicable** |
| Document Controller | Document Controller | XXXX  [The same person on each document] |  |
| Document Owner/Approver | Document Owner/Approver | Director of Projects/ Manager Major Projects |  |
| [Contractor] | Document Originator | [Title] |  |
| [Consultant] | Document Reviewer | [Title] |  |
| Airport Development Group | Document Reviewer | Project Manager |  |
| Airport Development Group | Document Reviewer | Facilities Manager |  |
| Airport Development Group | Document Reviewer | Head of Electrical |  |

1. Document Approval, Use and Revision History

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Volume** | **Version** | **Date** | **Reason** | **Company** | **Person(s) or Position(s)** | **Comments** |
| [Example:  No. of Volume] | [Example:  Revision Letter or Number] | [Example:  Date of Revision i.e., 2023-02-02] | [Example:  Amendment, Review, Transmitted, etc.] | [Example:  Company Name] | [XXXX [Name]  XXXX [Title]] | [Example:  DRAFT Manual Issued to ADG PM for review] |
| Etc. | Etc. | Etc. | Etc. | Etc. | Etc. | Etc. |

1. Document Guide

This template is a combined manual incorporating both Contractor and Architectural requirements.

Should a section not be applicable, place **‘Not Applicable’** in the respective section.

This template is only to be used for ‘Projects’ only and is required to be approved for use by the Director of Projects.

Provide information in each section within the manual consistently in trade discipline order as follows: -

* Architectural
* Communications
* Electrical
* Fire
* Hydraulic
* Mechanical
* Security
* Structural
* Urban, Structural and Open Spaces

**Exclude all irrelevant matter within this template.**

## Description of the Installation

Provide a full description of the project including but not limited to the following:

1. Overall scope of works
2. Project Specific Location i.e., Address
3. Listing of the trades
4. Project stages
5. Project commencement and completion dates
6. Any work which may have been completed by others (i.e. works completed by others and not the Contractor)

## Directory of Contacts

Provide in table format a combined contact list which includes Contractors, Consultants, ADG Project Manager and trade discipline.

Contact details to be provided in order as follows:

1. Company Name
2. Contact Name (Representative)
3. Company Position
4. Contact Number (Representative)
5. Company Address
6. Company Email Address
7. After-Hours Contact Name
8. Contact Number

Sample table format as follows:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Trade Discipline** | **Company Name** | **Contact Name (Representative)** | **Contact Number (Representative)** | **Company Address** | **Company Email Address** | **After-Hours Contact Name and Contact Number** |
| Contractor |  |  |  |  |  |  |
| Consultant |  |  |  |  |  |  |
| ADG Project Manager |  |  |  |  |  |  |
| Trade Discipline |  |  |  |  |  |  |
| Etc. |  |  |  |  |  |  |

## Certificates and Forms

This section is separated into (2) subsections as follows:

1. Legal Compliance and Statutory Authorities

Essential Safety Provisions

### Legal Compliance and Statutory Authorities

Provide signed copies of all Legal Compliance and Statutory Certification including but not limited to the following:

1. Certificate of Occupancy [Schedule 19 of the Development Act 1993 and Development Regulations 2008]; and
2. Statement of Compliance – Builder’s Statement [Schedule 19A of the Development Act 1993 and Development Regulations 2008];

Please state below if a specific Certificate is **‘Applicable’** or **‘Not Applicable’** to this section for this project.

Sample table format as follows:

|  |  |
| --- | --- |
| **Legal Compliance and Statutory Authorities Certification Type** | **Applicable/Not Applicable** |
| Development Approval |  |
| Certificate of Occupancy |  |
| Builder’s Statement |  |

Note:

1. Where applicable, include copies of certificates in order as listed above.

### Essential Safety Provisions

Provide signed copies of all Essential Safety Provisions certificates and forms including but not limited to the following:

1. Schedule of Essential Safety Provisions
2. Certificate of compliance with Essential Safety Provisions
3. Certificate of compliance with maintenance procedures

Please state below if a specific Certificate and/or form is **‘Applicable’** or **‘Not Applicable’** to this section for this project.

Sample table format as follows:

|  |  |
| --- | --- |
| **Legal Compliance and Statutory Authorities Certification Type** | **Applicable/Not Applicable** |
| Schedule of Essential Safety Provisions [Form 1, Schedule 16 of the Development Regulations] |  |
| Certificate of compliance with Essential Safety Provisions [Form 2, Schedule 16 of the Development Regulations] |  |
| Certificate of compliance with maintenance procedures [Form 3, Schedule 16 of the Development Regulations] |  |

Note:

1. Where applicable, include copies of certificates in order as listed above.

## Warranties

Provide in table format a combined warranties schedule for each trade discipline listing all Warranty periods including but not limited to:

1. Manufactures Warranties.
2. Installation Warranties.
3. Material Warranties.
4. Defects Liability Warranties; and
5. Assignment of warranties

Sample table format as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trade Discipline** | **Manufactures Warranties** | **Installation Warranties** | **Material Warranties** | **Defects Liability Warranties** |
| Trade Discipline |  |  |  |  |
| Etc. |  |  |  |  |

Note:

1. Copies of warranties for each trade discipline are to be included in this section.
2. Confirmation that warranties have been assigned to the Airport Development Group.
3. Warranties commence from the date of practical completion (identify any departures where warranties do not commence from date of practical completion).
4. Should a warranty not apply insert ‘Not Applicable’.
5. Warranty expiry dates to be included in Asset Register

## Training Plans and Records

The contractor is to provide full details of training provided to end users including copies of documentation issued (e.g., presentations and attendance records) if applicable.

## Occupational Health and Safety / Hazardous Materials

The Contractor is to provide the following:

1. A copy of Safety in Design register
2. A copy of Safety in Construction (Risk Assessment) register
3. Copies of Asbestos clearance certificates
4. Safe Operating Procedures (SOP) that have been developed during the project delivery process.

## Document Register

Provide a combined document register including As-Built drawings, Specifications, Space Charging base floor plans in table format including the following necessary components as follows:

1. Document Number
2. Document Name/Title
3. Discipline (i.e. Architectural, Electrical etc.)
4. Issued by (i.e. Builder name, Consultant name etc.)
5. Revision
6. Revision Date

Sample table format as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Document Number** | **Document Name/Title** | **Discipline (i.e. Architectural, Electrical etc.)** | **Issued by (i.e. Builder name, Consultant name etc.)** | **Revision** | **Revision Date** |
|  |  |  |  |  |  |
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Note:

1. Documents to be submitted separately with the Manual in both pdf and dwg format.
2. If a ‘full’ document register is provided (all disciplines etc) then clearly identify the documents relevant to the manual.

## Asset Register

The Contractor (in conjunction with the Consultant) are to provide an asset register reflecting all new, removed/demolished assets during the construction process.

Note:

1. The Contractor must provide item 1.3 (2) two months prior to Practical Completion for review and approval by the Airport Development Group.
2. Provide the asset register in the template provided supplied in an .xls file document.
3. Consultant to identify assets which have been removed/demolished.
4. At start-up phase the ADG representative is to complete responsibility column of asset register to identify Infrastructure or Departmental maintained assets.
5. Asset register to be submitted in conjunction with the Defects Liability Period (DLP) Maintenance Schedule.

## Defects Liability Period (DLP) Maintenance Schedule

The Contractor is required to provide a combined maintenance schedule in a spreadsheet, provided by ADG. Provide maintenance schedule (2) two months prior to Practical Completion.

Sample table format as follows:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Equipment Code** | **Site** | **PM Procedure** | **Date for First DLP PM** | **Date of Last DLP PM** | **Freq. 1 Interval** | **Interval Type** |
| 1ABCXXX | DIA - Terminal | DLP (M) | 2022-07-01 | 2021-07-01 | 1 | M |
| 1ABCXXY | DIA - Terminal | DLP (Q) | 2022-10-01 | 2021-07-01 | 3 | Q |
| 1ABCXXZ | DIA - Terminal | DLP (A) | 2022-12-01 | 2021-07-01 | 12 | A |

Note:

1. Refer to DLP Scheduling procedure provided by the Airport Development Group.
2. Provide completed DLP Maintenance Schedule in conjunction with the Asset Register.
3. The Contractor must provide maintenance schedule (2) two months prior to Practical Completion.

## Care and Maintenance Instructions

The Contractor is to provide all details for care and maintenance instructions for this trade discipline as recommended by manufacturers/suppliers. These shall include but not limited to the following:

1. Step by step procedures for safe trouble shooting, maintenance and repair
2. Cleaning and maintenance instructions

Note:

1. Contactor contact details are to be recorded in Section 1.2
2. The Contractor must provide care and maintenance instructions (2) two months prior to Practical Completion.

## Installation, Dismantling and Technical (Performance) Data

The Contractor is to provide full details of installation, dismantling and reassembly instructions including manufacturer’s technical (performance) literature that includes a description of the functionality and mode of operation of each system provided for this trade discipline including but not limited to:

1. Equipment brochures
2. Specifications
3. Data sheets
4. Drawings

Note:

1. Mark each product data sheet to clearly identify the specific products and components used in the installation and the data applicable.
2. All installations must be carried out in accordance with manufacturer specifications and data sheets to ensure product performance over its intended life and so as not to invalidate any warranties.

## Operating Instructions

The Contractor is to provide operating instruction of each system provided for this trade discipline including but not limited to:

1. Safe starting, operating and shutting-down procedures for the equipment installed
2. Control sequences and flow diagrams for the systems installed (where applicable)
3. Fire mode interconnection and operation
4. Legends for colour-coded services (where applicable)

## As-Built Drawings

The Contractor (in conjunction with the Consultant) are to provide ‘as built’ drawings reflecting all changes made in the specifications and working drawings during the construction process, showing the exact dimensions, geometry, and location of all elements of the work completed under the contract.

Note:

1. Documents to be submitted separately with the Manual in both pdf and dwg format.
2. Provide other related documents not included in the body of the manual (exception being the asset register).
3. Identify measurement points used to achieve commissioning data.
4. All drawings to include legends/keys/schedules where applicable.

## Commissioning and Testing Data

The Contractor is to provide commissioning and testing records for each system and component for this trade discipline.

Note:

1. All records must be witnessed and verified by the ADG Project Manager in consultation with the Consultant and/or Designer.
2. Schedules of the parameter settings of each protective device (Including fixed and adjustable circuit breakers, protective relays, adjustable photoelectric switches, pressure switches, and any other control and monitoring device, as established during commissioning and maintenance).

## Specialist Tools and Testing Equipment

This section is expected to contain:

A combined Specialist tools and testing equipment register in table format used for the operation, maintenance and dismantling or assembly of the plant and equipment for each system including the following necessary components as follows:

1. Tool Type
2. Tool Reference
3. Number of Tools

Sample table format as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| **Trade Discipline** | **Tool Type** | **Tool Reference** | **Number of Tools** |
| Trade Discipline |  |  |  |
| Etc. |  |  |  |

Note:

1. This applies to special, non-generic tools and instruments that are not commercially available for the operation, maintenance and dismantling or assembly of the plant and equipment.
2. Provide a register/transmittal of handover of tools including both signatories from Builder and ADG.
3. Should a section not apply insert ‘Not Applicable’.

## Spares and Consumables

The Contractor is to provide a combined spares, special tools register and portable indicating instruments in table format which are used for the operation, maintenance, dismantling or assembly of plant and equipment: Include the following necessary components as follows:

1. Manufacturers Name
2. Manufacturers Address
3. Manufacturers Contact Number
4. Catalogue Number
5. Name of Local Distributor
6. Address of Local Distributer
7. Expected Replacement Frequency
8. Storage of Spares
9. Number of Spares

Sample table format as follows:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Trade Discipline** | **Manufacturers Name** | **Manufacturers Address** | **Manufacturers Contact Number** | **Catalogue Number** | **Name of Local Distributor** | **Etc.** |
| Trade Discipline |  |  |  |  |  |  |
| Etc. |  |  |  |  |  |  |

Note:

1. Provide a register/transmittal of handover of tools including both signatories from Builder and ADG.
2. Should a section not apply insert ‘Not Applicable’.

## Imported Equipment

The Contractor is to provide in table format a combined list of imported equipment including type, cost, and country of origin and importer details.

Sample table format as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trade Discipline** | **Type of Equipment** | **Cost** | **Country of Origin** | **Importer Details** |
| Trade Discipline |  |  |  |  |
| Etc. |  |  |  |  |

Note:

1. Details of any specialized equipment and/or materials which may be subject to procurement risk.
2. Should a section not apply insert ‘Not Applicable’.